

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Maarten Menzo Wentink
Title: DYNAMIC TRANSMISSION PROTECTION IN THE PRESENCE OF
MULTIPLE MODULATION SCHEMES
Appl. No.: 10/688,527
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Examiner: Leon T. Andrews
Art Unit: 2462
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PRE-APPEAL BRIEF REQUEST FOR REVIEW

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In accordance with the new Pre-Appeal Brief Conference Pilot Program, announced July 11, 2005, this Pre-Appeal Brief Request is being filed together with a Notice of Appeal and with the required fee in response to the Final Office Action dated March 16, 2011, and the Advisory Action dated June 21, 2011.

Claim Rejections Under 35 U.S.C. § 103

On page 2 of the Final Office Action, Claims 1-4, 20-22, 24, and 38-40 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over allegedly Admitted Prior Art in the Background of the present application (U.S. Patent Application Publication No. 2004/0136339) (hereinafter "AAPA") in view of U.S. Patent No. 7,046,649 to Awater et al. (hereinafter "Awater") and U.S. Patent No. 5,912,644 to Wang (hereinafter "Wang"). On page 6 of the Final Office Action, Claims 6, 8-12, 15-19, 26-30, 33-37, 42, 44-48, and 50-53 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over AAPA in view of Awater. Applicant respectfully requests reversal of these rejections.

A. Claims 1-5, 20-23, and 38-40

Independent Claim 1 recites, in part (with emphasis added):

responsive to a determination that the first device is not in a power save state, (i) enabling transmission protection at the access point; and (ii) transmitting, from the access point, a message requesting that a second device enable transmission protection, wherein the second device and the access point are

configured to communicate in accordance with a first and second modulation scheme.

Independent Claims 20 and 38, though different in scope, include similar claim elements. Applicant respectfully submits that AAPA, Awater, and Wang, alone or in combination, fail to disclose, teach, or suggest such an element.

On page 3 of the Final Office Action, the Examiner relied on lines 1-5 of paragraph [0015] of AAPA for its alleged disclosure of such elements. In the Advisory Action, the Examiner paraphrased AAPA and further stated that “enhanced station (not in the power save mode) transmits a short frame using the first modulation scheme, ¶ 15, page 1, lines 1-4)” allegedly discloses the element “response to a determination that the first device is not in a power save state.” Applicant respectfully disagrees with the Examiner’s characterization of the Background section of the present application.

Paragraph [0015] of AAPA states:

In accordance with transmission protection, an enhanced station that is about to transmit a frame using the second modulation scheme first transmits a short frame using the first modulation scheme. This short frame is detectable by the legacy stations in the area.

As such, the cited portions of AAPA relied on by the Final Office Action discloses that a station that is about to transmit a frame using a “second modulation scheme” first transmits a short frame using “the first modulation scheme.” However, AAPA fails to provide any indication that such transmissions are “responsive to a determination that the first device is not in a power save state.” Indeed, AAPA fails to provide any indication that these transmissions are prompted by a change in status of another device.

The Examiner does not assert that Awater and Wang cure these deficiencies of AAPA and indeed they do not. On page 2 of the Office Action, Awater was relied on merely for its alleged disclosure of a “computer-readable medium, memory, and processor.” Awater fails to provide any disclosure of transmission protection communications that are “responsive to a determination that the first device is not in a power save state,” as claimed.

As discussed above, on page 4 of the Office Action, column 9, lines 8-10 of Wang was relied on for its alleged disclosure of a “station goes into a power saving mode.” Wang discloses merely that a “station” may go into a “power saving mode at the request of [a] central station.” (See column 9, lines 7-11.) However, merely because a station may enter a “power saving mode at the request of a station” does not disclose, teach, or suggest “enabling transmission protection at the access point” and “transmitting, from the access point, a message requesting that a second device enable transmission protection” in response to a “determination that a first device [different from the first device and the access point] is not in a power save state,” as claimed. (Emphasis added.)

Furthermore, AAPA fails to disclose, teach, or suggest that the “second device” and the “access point” are “configured to communicate in accordance with a first and second

modulation scheme.” Such claim elements preclude the interpretation of the legacy station of paragraph [0006] of the present specification as corresponding to either of these devices. This is because paragraph [0006] of the present specification clearly sets forth that the legacy station can only communicate via “a first modulation scheme.” In contrast, independent Claims 1, 20, and 38 recite that the “second device and the access point are ... configured to communicate in accordance with a first and second modulation scheme” (Emphasis added.) Because a legacy station does not operate in this manner, Applicant respectfully submits the rejection based on AAPA is improper and cannot be reasonably maintained.

B. Claims 6, 7, 24, 25, 42, and 43

On page 6, the Final Office Action alleged that the combination of AAPA and Awater renders independent Claims 6, 24, and 42 unpatentable. Applicant respectfully disagrees.

Independent Claim 6 recites, in part (with emphasis added):

receiving, at an access point, a first frame from a first device configured to communicate in accordance with a first modulation scheme;
in response to receiving the first frame from the first device, (i) enabling transmission protection at the access point; and (ii) broadcasting from the access point a message requesting that a second device enable transmission protection, wherein the second device and access point are configured to communicate in accordance with the first modulation scheme and a second modulation scheme.

Independent Claims 24 and 42, though different in scope, recite similar elements.

For at least the same reasons as set forth above in Section A, Applicant respectfully submits that AAPA and Awater, whether considered alone or in combination, fail to disclose, teach, or suggest such elements. In addition, as discussed above, the cited portions of AAPA relied on by the Office Action disclose merely a “local area network 100” that uses a “shared communications channel” to provide communications. Paragraph [0015] further states that a station that is about to transmit a frame using a “second modulation scheme” first transmits a short frame using “the first modulation scheme.” However, AAPA fails to provide any indication that “in response to receiving the first frame from the first device, enabling transmission protection at the access point” and “broadcasting from the access point a message requesting that a second device enable transmission protection,” as claimed. Thus, Applicant respectfully requests withdrawal of this rejection.

C. Claims 8-11, 26-35, and 44-49

Independent Claim 8 recites, in part (with emphasis added):

the first message and the second message are continuously transmitted in an alternating pattern ...; and

in response to receiving a message from a second device at the access point, adjusting the time period separating the transmission of the first message and the second message, wherein ... second device and access point are configured to communicate in accordance with the first modulation scheme and a second modulation scheme.

Independent Claims 26 and 44, though different in scope, recite similar elements.

On page 8, the Final Office Action asserted that such elements are disclosed by paragraphs [0003], [0015], and [0017] of AAPA. Applicant respectfully disagrees. Paragraph [0003] discloses merely that a “local area network 100” uses a “shared communications channel” to provide communications. As discussed above, paragraph [0015] states that a station that is about to transmit a frame using a “second modulation scheme” first transmits a short frame using “the first modulation scheme.” Paragraph [0017] discloses a mechanism for “notifying all of the enhanced stations in the network when to use and when not the use transmission protection.” However, notifying a device when to use and when not to use transmission protection cannot be reasonably interpreted as adjusting a messaging time period “in response to receiving a message from a second device at the access point” or as “continuously transmit[ing] messages in an alternating pattern.”

On page 8 of the Final Office Action and in the Advisory Action, the Examiner appeared to further analogize the “duration field with the length of time for transmission of frames using the second modulation scheme” (as disclosed in paragraph [0016]) to the claimed “adjusting the time period separating the transmission of the first message and the second message.” However, paragraph [0016] discloses merely that the “short frame” includes a “duration field” that “indicates how long the legacy terminals should refrain from transmitting.” Nowhere does AAPA disclose “adjusting” this “duration field” “in response to receiving a message from a second device at the access point.” In making the present rejections, the Examiner appears to be reading additional subject matter into the Background section of the present application that is not actually disclosed in the Background section.

D. Claims 16-19, 34-37, and 50-53

Independent Claim 16 recites, in part (with emphasis added):

transmitting from an access point a first frame comprising a duration field with a value to a first device via a shared-communications channel in a wireless local area network in accordance with a first modulation scheme, wherein the first device is configured to communicate in accordance with the first modulation scheme and a second modulation scheme.

Independent Claims 34 and 50, though different in scope, recite similar elements. Applicant respectfully submits that such elements distinguish the claims from AAPA inasmuch as it particularly describes that the first frame with a duration field is transmitted “to a first device ... configured to communicate in accordance with the first modulation scheme and a second modulation scheme.” In contrast, paragraphs [0015] and [0016] of

AAPA describe that the frame is transmitted to the legacy device, which only communicates in accordance with the first modulation scheme (with emphasis added):

In accordance with transmission protection, an enhanced station that is about to transmit a frame using the second modulation scheme first transmits a short frame using the first modulation scheme. This short frame is detectable by the legacy stations in the area.

A duration field in the short frame contains a value that indicates how long the legacy terminals should refrain from transmitting, and the field is populated with a duration that is long enough to cover the length of time for transmissions of frames using the second modulation scheme. The duration information inside the Request-to-Send or Clear-to-Send frame activates a virtual carrier sense mechanism in the legacy stations, which will not transmit, as a result, during the protected, subsequent second transmission.

Paragraph [0006] of the present specification clearly sets forth that the legacy station can only communicate via a “first modulation scheme.” Thus, it is improper to analogize the “legacy station” to the claimed “first station,” because the “legacy station” is not capable of communicating in accordance with both a “first modulation scheme and a second modulation scheme,” as claimed.

Accordingly, Applicant respectfully submits that AAPA, Awater, and Wang, alone or in combination, fail to disclose, teach, or suggest at least one element recited in each of the various independent claims (and their associated dependent claims). Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of Claims 1-4, 6, 8-12, 15-22, 24, 26-30, 33-40, 42, 44-48, and 50-53 under 35 U.S.C. § 103(a).

In view of the foregoing, it is respectfully submitted that Claims 1-4, 6, 8-12, 15-22, 24, 26-30, 33-40, 42, 44-48, and 50-53 are in condition for allowance.

Respectfully submitted,

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